DOCUMENT RESUME

ED 358 055 SP 034 497

AUTHOR Packard, Richard D.; Dereshiwsky, Mary I.
TITLE Final Accumulative Results & Transfer of Knowledge of the Arizona Career Ladder Research & Evaluation Project: Impact on Student Achievement, Formulated Models, Network Anecdotes, & Recommendations to the Legislature for Policy Development, Program Continuation & State-Wide Expansion. Summative Report VIII.
INSTITUTION Northern Arizona Univ., Flagstaff. Center for Excellence in Education.
PUB DATE Jan 90
NOTE 59p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement; *Career Ladders; Change Strategies; Elementary School Teachers; Elementary Secondary Education; Incentives; *Merit Rating; Models; Pilot Projects; Program Development; *Program Evaluation; Rewards; Secondary School Teachers; State Legislation; State Programs; *Teacher Motivation
IDENTIFIERS *Arizona

ABSTRACT

This paper presents research findings concerning the Career Ladder pilot test program in Arizona. The program is designed to reward and motivate teachers based on performance. One of the program's key features is the flexibility and innovation allowed to participating districts in their individual development of program designs and structures. An example of a district program is provided, followed by a theoretical model of program support and focus factors which influence district potential for successful implementation of an external educational reform program such as Career Ladders. An associated diagnostic profiling procedure for assessing the operational level of each of the focus and support factors as they currently exist within each district is then explained. Through a series of qualitative anecdotes, the viewpoints of career ladder program participants are presented, focusing on such areas as student achievement, teacher skills, administrator skills, professional input, funding, and organizational climate and communications. Exhibits include: (1) a matrix of initial legislative mandates, major research findings, and implications for future policy; (2) a summary of the anecdotal reports from participating districts; (3) a summary of recommendations to the Joint Legislative Committee on Career Ladders; and (4) an analysis of the impact of the Career Ladder program on student achievement. (JDD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED358055

SUMMATIVE REPORT VIII

FINAL ACCUMULATIVE RESULTS & TRANSFER OF KNOWLEDGE

OF THE ARIZONA CAREER LADDER RESEARCH & EVALUATION PROJECT

—

Impact on Student Achievement, Formulated Models, Network Anecdotes,

& Recommendations to the Legislature for Policy Development,

Program Continuation & State-Wide Expansion

—

by

Dr. Richard D. Packard, Director

&

Dr. Mary I. Dereshiwsky, Statistical Research Specialist

The CEE - R & D Partnership

Center for Excellence in Education - Northern Arizona University

Box 5774 - Flagstaff, Arizona - 86011

Ph: (602) 523-5852

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

—

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R D. Packard

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Document Submitted for Use by the

Arizona State Legislature, School Districts, Educational Researchers

& Interested Professionals & Citizens

Across the United States

January, 1990

S P034 497

Table of Contents

Page

List of Figures iv

Impact on Student Achievement, Formulated Models, Network Anecdotes, and Recommendations to the Legislature for Policy Development, Program Continuation and State-Wide Expansion 1

Introduction 1

Overview of Program Findings to Date 1

Organization of the Report 1

Program Designs and Structures 2

District Readiness to Support Change: A Proposed Model of Key Support and Focus Factors 6

Profiling: A Methodology to Assess Individual Districts' Readiness to Support Change Processes 6

Combining Readiness with Accountability: The Assessment Model of Alternative Program Placement Levels 10

Summative Matrix Comparison of Initial Legislative Mandates, Research Findings, and Related Policy Implications 15

Career Ladders Anecdotal Information 16

Introduction 16

Student Achievement (Production and Outcomes) 16

Curriculum/Instruction/Student Achievement Measurement 17

Teacher Skills (Development and Leadership) 17

Administrator Skills (Development and Leadership) 18

Evaluation (Teacher and Administrator) 19

Motivation (Intrinsic/Extrinsic) 20

Local Finance and Funding (Salary Schedule) 20

District Research and Development (Program Evaluation) 21

Professional Input (Ownership) 21

Program Designs and Structures 22

Table of Contents (Cont'd)

Page

Local Governing Board (Understanding and Support) 23

Organizational Factors (Climate and Communications) 24

Change and Improvement (Long-Range Plans) 25

District Readiness Level (Assessment) 25

Essential Elements for Educational Improvement and Success. 26

State Finance and Funding 26

State Governing Board (Accountability/Implementation) 27

Legislative Guidelines 27

Analysis of Research Variables, Program Evaluation and Improvement 28

Arizona Legislature 29

Career Ladder Pilot District Network (CLPDN) 29

Department of Education (DOE)/State Board 30

Summary Comments 30

Conclusion 31

Exhibit A - The Arizona Career Ladder Research & Evaluation Project Matrices of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Focus and Support Factors 32

Exhibit B - The Arizona Career Ladder Research & Evaluation Project Summated Matrices Depicting Positive Anecdotes Related to Interrelated Organizational Focus & Support Factors In Successful Career Ladder Pilot-Test School Districts 39

Exhibit C - Summative Report IX: Executive Summary: Recommendations to the JLCCL for Pre-Legislative Phase of the Arizona Career Ladder Program 47

Exhibit D - Summative Report X: The Arizona Career Ladder Research & Evaluation Project Findings Related to Student Achievement: Qualitative and Quantitative Evidence Relative to the Positive Impact of the Career Ladders Teacher Incentive Program on Student Achievement in Arizona Pilot-Test School Districts 50

List of Figures

Page

Figure 1 - Program Designs and Structures (Sample from One District for 1986-87) 4

Figure 2 - Mapping the Developmental Process for Effective School Reform: Designs and Structures 7

Figure 3 - District Readiness Profile of Strengths and Weaknesses - Focus Factors 10

Figure 4 - District Readiness Profile of Strengths and Weaknesses - Support Factors 11

Figure 5 - Assessment Model for Projected District Readiness Levels 13

FINAL ACCUMULATIVE RESULTS AND TRANSFER OF KNOWLEDGE OF THE ARIZONA CAREER LADDER RESEARCH AND EVALUATION PROJECT

Impact on Student Achievement, Formulated Models, Network Anecdotes, and Recommendations to the Legislature for Policy Development, Program Continuation and State-Wide Expansion

Introduction

Overview of Program Findings to Date

The Arizona Career Ladder Program has provided enough time and experience to show considerable developmental success toward meeting the program goals related to rewarding and motivating teachers based on performance and accounting for that performance with more than just the processes of evaluating teachers' classroom methodologies. Districts and teachers have made substantial progress in actually demonstrating positive effects on student achievement through valid curricular content which has been planned to meet student needs in each local district and school. (See **Exhibit D**, pp. 50-52, Research Findings Related to Student Achievement).

The second major program success relates to the extended time and additional responsibilities which have enlarged critical job assignments of teacher leaders. This program encourages teachers to move from the isolation of individual classrooms and empowers them to assume major responsibilities in assisting schools, districts and the total community in meeting the social, emotional and academic needs of students.

Organization of the Report

The purpose of this paper is to present the research findings to date concerning the Career Ladders pilot test program in Arizona. Research results will be organized according to the following themes.

A key feature of the legislative guidelines is the flexibility and innovation allowed to participating districts in their individual development of *program designs and structures.* A sample plan is presented and its components discussed.

The next topic consists of a proposed *model of organizational focus and support factors* which need to be operating satisfactorily for outside change programs to be maximally effective. This comprehensive model was developed from the researchers' observation of diverse individual districts' struggles to comply with theoretically "fair," uniform legislative guidelines. it points up the fact that the most well-intentioned

educational reform efforts are doomed to failure if existing organizational elements are not currently at adequate readiness levels to support such change efforts.

The repeated observation of this model in practice has essentially validated its usefulness for a number of diagnostic and evaluative purposes. One application of the focus and support factors is sketched out relative to one another and to a zero baseline. By doing so, it enables users to assess, at a glance, the current level of operational health of each of these factors.

Classifying districts according to their various levels of readiness has also led to a proposed *three-tiered Career Ladder participation and placement scheme*. This would enhance the potential for a successful experience with the program, by realistically replacing the "all-or-nothing" participation system with one which is more closely matched to actual present capabilities.

The first exhibit contains a convenient, side-by-side columnar summary of *initial legislative mandates* concerning the Career Ladder pilot test, the *major research findings to date, and the resultant implications for future policy* regarding this teacher incentive program. These results are clustered according to certain key organizational focus and support factors, thereby linking them back to the proposed readiness model.

Exhibit B contains the participating districts' responses to positive results of the Career Ladder program as reported under each organizational focus and support factor. As such, these qualitative, open-ended comments, or *anecdotes*, provide an in-depth, rich view of the effects of the Career Ladder program as it was actually experienced by the participants themselves. Responses are organized under each focus and support factor and summarized in tabular fashion. The accompanying narrative provides ample illustrations of the detailed, colorful quotes provided by participating districts.

The third exhibit consists of an *executive summary of recommendations to the Joint Legislative Committee on Career Ladders (JLCCL)*. Research findings, as well as critical lessons which have been learned to date, are concisely outlined.

Finally, the fourth exhibit summarizes all of the available research findings concerning *the impact of the Career Ladder program on student achievement*. Results have converged on four critical conclusions with respect to student learning. These are diagrammed in summary fashion on page 52 of Exhibit D.

Program Designs and Structures

The Arizona Career Ladder program has been structured so as to allow each district the optimal combination of flexibility and structure. Each participating district has been responsible for formulating its own plan, which documents requirements relative to

evaluation procedures, opportunities for teacher advancement, financial and intrinsic incentives, and mechanisms for resolving questions and conflicts. This relative autonomy in creating plans allowed each district to consider its own unique operating conditions and to ensure that these were fully and equitably integrated into the associated "rules and regulations" of the external program.

Figure 1, p. 4, shows an example developed by a district for the 1986-87 year. This district has four levels of placement, as well as six steps within each level, for its participating Career Ladder teachers. Each level has been characterized by an array of required responsibilities, as well as maximum and minimum levels of overall experience and teacher development activities.

As described earlier, the mandate for accountability necessitates having a well-developed evaluation system in place. This district's evaluation procedures include submission of a portfolio with clearly spelled out documentation of teacher activities. Associated review and assessment procedures for this evidence of participant activities are also included as a part of the evaluation description.

Even the most carefully thought out program design is itself subject to revision, as a "paper plan" is tested against the reality of sometimes-unpredictable organizational operating conditions. In this spirit, the bottom portion of **Figure 1**, on the following page, contains a listing of participant reactions to the initial attempts at implementation of their plans. Review of "plan-vs.-reality" helps ensure that the internal self-monitoring and feedback mechanism generates timely, relevant information for fine-tuning program structures so as to be maximally operational.

Legislative guidelines have mandated specific areas which need to be addressed in applicant-districts' program designs. These include professional advancement; education as a requirement; plans for program implementation; periodic program evaluation; and administrative evaluation. By explicitly including these areas, the intent of the legislature was for districts to "think through" the full range of ramifications of such an external incentive program, as it would impact upon their existing organizational systems. As a result, the plans which these districts developed for submission were expected to be sufficiently detailed and comprehensive.

Evidence from the five-year pilot test indicates that the program plans submitted by district-applicants have, in fact, been exemplary -- on paper, at least. Implementation of these "elegant blueprints," however, has been another story. Individual districts' struggles to comply with their own well-intentioned guidelines have exemplified the *diversities in readiness* referred to in preceding sections of this document. In particular, the implementation plans of these carefully developed program designs and structures

Figure 1

PROGRAM DESIGNS AND STRUCTURES
Sample from One District for 1986-87

Career Levels

Level 1 — Minimum 1 year; maximum 3 years/ Assigned to Level III mentor/ 45 hours of inservice required/ Competent evaluations minimum/ Emphasis is on classroom teaching performance.

Level 2 — Minimum 1 year in-district; no max./ Teamed with Level III/ 15 hours in inservice/ One committee minimum/ Document student academic progress/ High level evaluations/ Emphasis on classroom performance and sharing of expertise.

Level 3 — Minimum 5 years in-district; no max/ Mentor; Models instruction/ No minimum hours of inservice/ Conducts school inservice activity/ Five additional work days/ Outstanding evaluations/ Emphasis on classroom, sharing of expertise, modeling and teacher preparation.

Level 4 — Minimum 1 year level III; no max/ Leadership/ Assists all other levels/ Ten additional work days/ Emphasis on classroom, mentoring, teaming activities and teacher training.

* Six steps within each level.

Evaluation

Portfolio Contents: Administrative approval and letters of recommendation; classroom evaluations; professional growth activity; plan of action for student progress; committee, special project or curriculum work; student academic progress; inservice planning and conducting; time and training requirements met; comprehensive review panel results (level 4).

Procedures: Evaluated by administrators; level 1 (3-4 observations)/ level 2 (1-2 evaluations) levels 3&4 (1 evaluation) per year; Portfolios reviewed by placement committee.

Other Key Components

- Mandatory for new teachers
- Downward movement possible
- Appeal process by committee review
- Sustained performance will allow teacher to remain at same level and step

1986 Written Comments Analysis and Other Observations

- CL teachers evaluated and placed on first four levels
- Concern that the key CLP evaluation criteria was the portfolio
- Concern over the communication flow; a great deal of teacher input, but few clear cut decisions that were communicated on a timely basis
- Concern over lack of inservice
- District found it necessary to "cap" salaries due to budgetary requirements
- A great deal of teacher resistance was felt as evidenced by petition sent to key CLP people
- Stated that focus for 1986-87 will be a revised teacher evaluation and CLP placement.

according to a set of uniform time-lines has proven futile. This, in turn, revealed the folly of legislating a supposedly "fair," single set of such time-lines for compliance. Greater flexibility with respect to time-lines more closely conformed to the extreme diversity in readiness, and ironically it was more equitable as well.

In contrast, there has emerged a consistent "bright spot" with regard to evaluating the reality of compliance with program designs and structures. Regardless of district readiness level, socio-economic status, or other individual differences, all teachers consider opportunities for professional improvement as a significant intrinsic motivator. They have availed themselves of inservice and other such incentives to the hilt. This initiative with respect to leadership and self-improvement has exemplified the finest qualities of the teaching profession and should serve as an ongoing source of pride for teachers and administrators alike.

This combination of "best intentions" and diversity to implement them represented a formidable challenge to researchers and policy-makers. How could a well-developed external program, with lofty plans and ideals for educational reform, be successfully integrated into such a wide variety of organizational structures?

The researchers responded to this challenge by stepping back and trying to identify the key factors which seemed to spell success or failure regarding external change efforts. Once these were pinpointed, an evaluation system could be devised to assess the actual "current level of operational health" of each of these critical areas within each district. As a result of this diagnostic procedure, both internal district decision-makers and external policy-makers would have a better gauge of the district's potential of success in actually following its roadmap of change effort successfully.

The next section will describe a theoretical model of necessary factors which influence district potential for successful implementation of an external educational reform program such as Career Ladders. An associated diagnostic profiling procedure for assessing the operational level of each of these focus and support factors, as they currently exist within each district, will be explained next. The combination of this profiling procedure with careful consideration of *accountability* for program implementation has led to a *multi-level placement procedure* of applicant-districts -- one which helps ensure a more realistic "match" of current capabilities and program participation requirements. Each of these areas will be discussed in turn.

District Readiness to Support Change: A Proposed Model of Key Support and Focus Factors

It quickly became apparent to the evaluators that the "*uniform*" legislative guidelines for program implementation, while no doubt designed to be clear, concise and straightforward, actually did *not* correspond well to the reality of participating districts' struggles to comply. That is, there existed an *extreme diversity in individual districts' readiness* to integrate and implement such external programs as Career Ladders in accordance with the single set of predetermined legislative time-lines.

In an attempt to understand and account for this diversity, the researchers have developed a *model of key focus and support factors* which must be operating at initially satisfactory levels within a given district *prior* to its adoption of an external program of change. This model is graphically depicted in **Figure 2, p. 7.**

The reader will note that external factors, such as legislative guidelines and state-mandated regulations and financing, form the foundation of the model. The within-district support factors include such areas as overall organizational climate and communication, as well as teacher-administrator evaluation procedures, professional input and ownership, and both intrinsic and extrinsic motivators. Especially noteworthy is the pivotal role played by professionals *in addition to* Career Ladder teachers themselves (for example, principals, superintendents, and school-board members) in determining the ultimate success or failure of the external program being implemented. At the pinnacle of the model one can find the essential focus factors, which include an adequately formulated and validated curriculum, ongoing opportunities for teacher skills development and leadership, and reliable procedures for linking teacher performance to student achievement using the latest available technology.

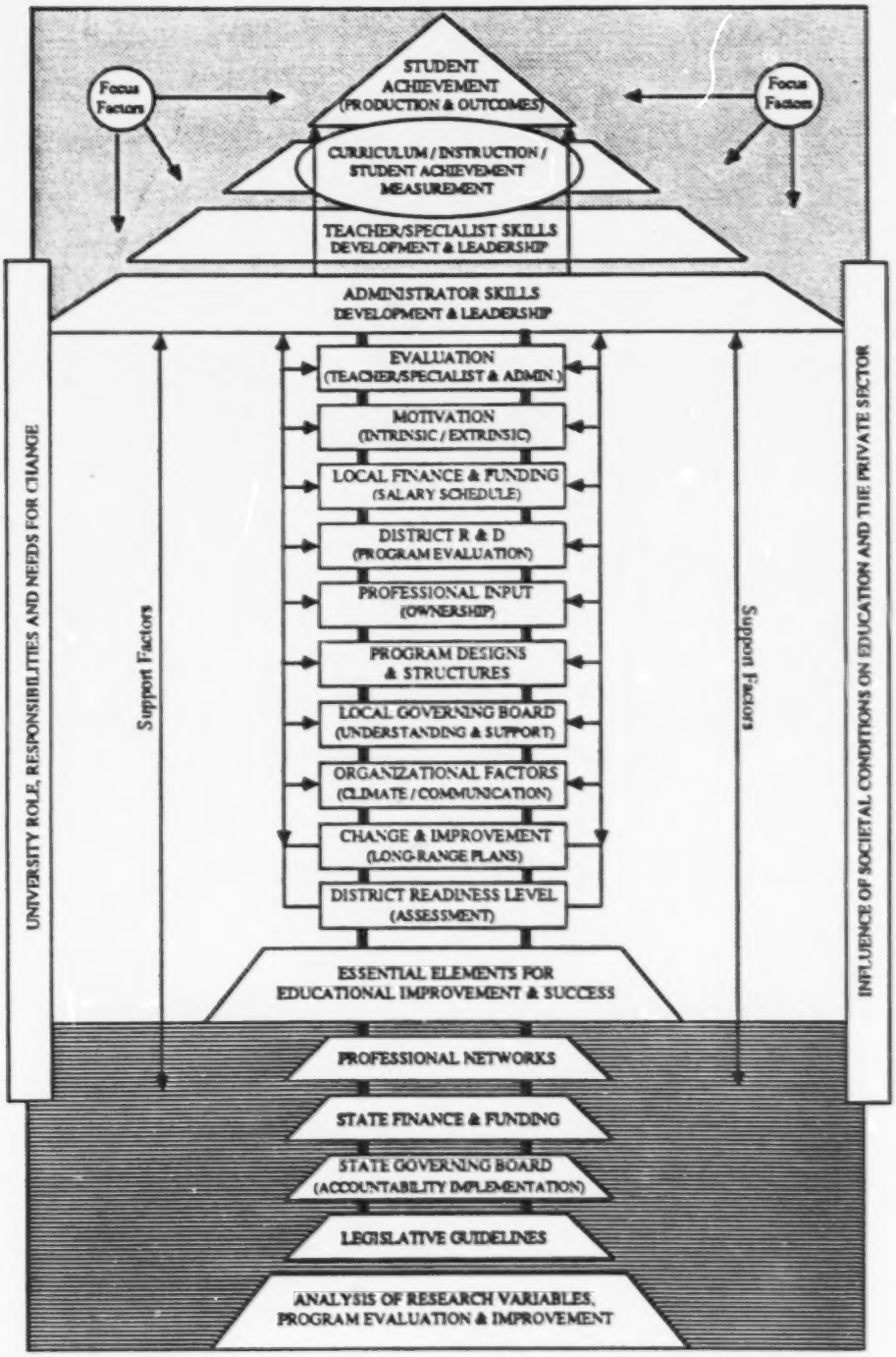
Profiling: A Methodology to Assess Individual Districts' Readiness to Support Change Processes

The aforementioned model has been repeatedly shown to be a valid indicator of those actual within-district elements which are pivotal to educational change and reform. In particular, this model has resulted in the development of a unique "diagnostic" research procedure known as *profiling*. The purpose of profiling is to present, in convenient graphical form, the relative position (reflecting "current operational health") of all of the focus and support factors for a given district, as compared to one another and to a "zero baseline." Thus an evaluator can tell, at a glance, which individual factors are functioning most adequately (as pictured by their appearance and relative distance *above* this zero baseline), as well as those which are in critical need of attention and remediation (by their appearance and relative distance *below* the baseline).

Figure 2

MAPPING THE DEVELOPMENTAL PROCESS
FOR EFFECTIVE SCHOOL REFORM:

Designs and Structures


Focus Factors
STUDENT ACHIEVEMENT (PRODUCTION & OUTCOMES)
Focus Factors
CURRICULUM / INSTRUCTION / STUDENT ACHIEVEMENT MEASUREMENT
TEACHER/SPECIALIST SKILLS DEVELOPMENT & LEADERSHIP
ADMINISTRATOR SKILLS DEVELOPMENT & LEADERSHIP
UNIVERSITY ROLE, RESPONSIBILITIES AND NEEDS FOR CHANGE
Support Factors
EVALUATION (TEACHER/SPECIALIST & ADMIN.)
MOTIVATION (INTRINSIC / EXTRINSIC)
LOCAL FINANCE & FUNDING (SALARY SCHEDULE)
DISTRICT R & D (PROGRAM EVALUATION)
PROFESSIONAL INPUT (OWNERSHIP)
PROGRAM DESIGNS & STRUCTURES
LOCAL GOVERNING BOARD (UNDERSTANDING & SUPPORT)
ORGANIZATIONAL FACTORS (CLIMATE / COMMUNICATION)
CHANGE & IMPROVEMENT (LONG-RANGE PLANS)
DISTRICT READINESS LEVEL (ASSESSMENT)
Support Factors
INFLUENCE OF SOCIETAL CONDITIONS ON EDUCATION AND THE PRIVATE SECTOR
ESSENTIAL ELEMENTS FOR EDUCATIONAL IMPROVEMENT & SUCCESS
PROFESSIONAL NETWORKS
STATE FINANCE & FUNDING
STATE GOVERNING BOARD (ACCOUNTABILITY IMPLEMENTATION)
LEGISLATIVE GUIDELINES
ANALYSIS OF RESEARCH VARIABLES, PROGRAM EVALUATION & IMPROVEMENT

A Model of Interrelated Components of Program Support and Focus Factors for Effecting Change and Reform in Education

BEST COPY AVAILABLE

This factor-by-factor profile originated from the analysis of pilot-test districts' open-ended written responses to six questions. These questions asked all Career Ladder teachers, a random sample of non-Career-Ladder teachers, and all administrators to identify the areas of *strength* and *insufficiency* of the Career Ladder program *overall, within their districts, and within their schools.*

These responses were read, summarized and clustered according to subjects' reference to particular areas of focus and support factors in their replies. For example, a mention of monetary incentives as a "strength" was keyed and clustered under the support factor entitled, "Extrinsic Motivators." Next, a weighting system was applied which essentially tallied the relative frequency of mention of each factor, with a "*plus* sign" assigned to mentions as *strengths*, and a "*minus* sign" for mentions as areas of *weakness*. Therefore, each focus and support factor for a profiled district yielded a *net sum*: the sum total of its mentions as an overall, district, or school strength, *minus* the sum of its mentions as an overall, district, or school weakness. (This procedure is akin to the accounting determination of "net income or loss" as "revenues" minus "expenses." If the former exceeds the latter, there is net *income*; otherwise, there is a net *loss*.)

Figure 4, p. 11, illustrates the graphical profile of support factors for a hypothetical district. Note that four of the support factors for this district turned out to have a greater frequency of mention as strengths than as areas of insufficiency. That is, the net total for the four areas (strengths subtotal minus weaknesses subtotal) resulted in a *positive* number. That is why they are all depicted as being *above* the zero baseline (also known as "*sufficiency of readiness baseline*") in **Figure 4**, p. 11. In addition, the upper half of the chart (representing greater-than-zero scores) is therefore labeled as "*Positive Readiness Factors*" in the shaded triangle in **Figure 4**, p. 11. Specifically, these four areas are: Local Finance and Funding; Change and Improvement; Network; and finally, General Finance and Funding.

Furthermore, of these four "relative strength" factors, Local Finance and Funding resulted in the *highest* positive point subtotal (shown as 30, in the bubble appearing in the lower-left-hand portion of its box). Thus, its relative ranking, in successively decreasing order of magnitude, is "1." This rank is depicted in the lower-right-hand box within the factor. Change and Improvement was the next-most-frequently mentioned relative strength, with an overall net total of 20 points and a relative rank of "2." The other two factors are interpreted similarly.

On the other hand, the remaining six support factors received a proportionately greater frequency of mention as overall, district, and/or school *weaknesses* than as strengths. That is why they appear *below* the sufficiency of readiness baseline in **Figure**

4, p. 11. For example, Professional Input and Ownership yielded a net score of -10. It can be seen, from glancing at the relative graphical array of "negative readiness factors" (shaded triangle in **Figure 4**, p. 11) that two of these support factors "tied" for being the greatest "anchors" or in most need of remediation prior to initiation of change efforts. These were Motivation: Intrinsic and Extrinsic and Organizational Factors (Climate and Communications), both of which resulted in a net score of -50.

Figure 3, p. 9, depicts the four focus factors in the same relative graphical array. One can note here that Teacher Skills Development and Leadership was the *sole* focus factor which emerged as a relative *strength*; this outcome, incidentally, has been repeatedly found to hold true for *all* of the participating Career Ladders pilot-test districts. On the other hand, the remaining three focus factors are "anchors" to any well-intentioned attempts to apply and integrate an external teacher incentive and development program within this hypothetical district. Of these three, Administrator Development and Leadership is *most* in need of urgent remediation, with a net score of -50.

In summary, this profiling procedure has proven to be an easily understood and convenient way to assess individual districts' current readiness to support external change efforts such as Career Ladders. This type of information as to relative strengths and areas of insufficiency is useful in a number of key respects. For one thing, it can be used by legislators to help allocate a total dollar amount of available program funds more realistically and equitably, enabling a maximal "return on (public-dollar) investment" by ensuring that a larger proportion of funds is awarded to those applicants with the greatest potential for success. In addition, it can serve as a useful diagnostic tool for individual districts in deciding whether they are, in fact, ready to apply for and initiate such external reform programs. Also, such profiling can serve as periodic "self-monitoring" of potential "red-flag" indicators of those areas which are "running smoothly," as well as those which are in need of immediate attention, once a given district has actually been approved for program funding.

Combining Readiness with Accountability: The Assessment Model of Alternative Program Placement Levels

An important aspect of program implementation is an entity's ability to *demonstrate accountability* for tangible results. In other words, a school district needs to have in place reliable procedures for determining "where we've been, how we're doing and where we're going" relative to program objectives. With dependable self-monitoring feedback loops and reporting procedures in place, the participating entity can demonstrate its commitment to actualizing goals, including applying self-corrective procedures if necessary.

Figure 3

DISTRICT READINESS PROFILE OF STRENGTHS AND WEAKNESSES

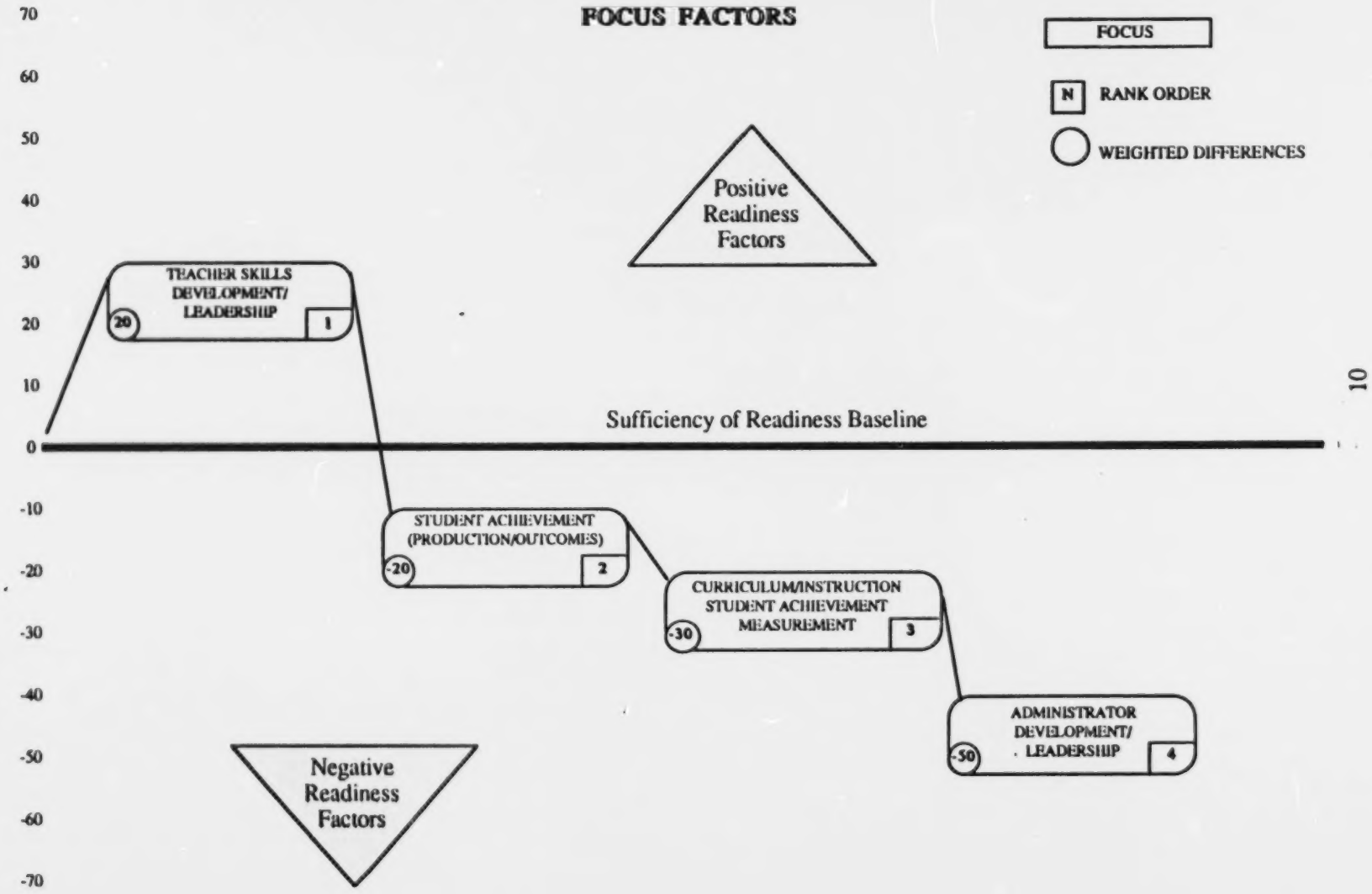
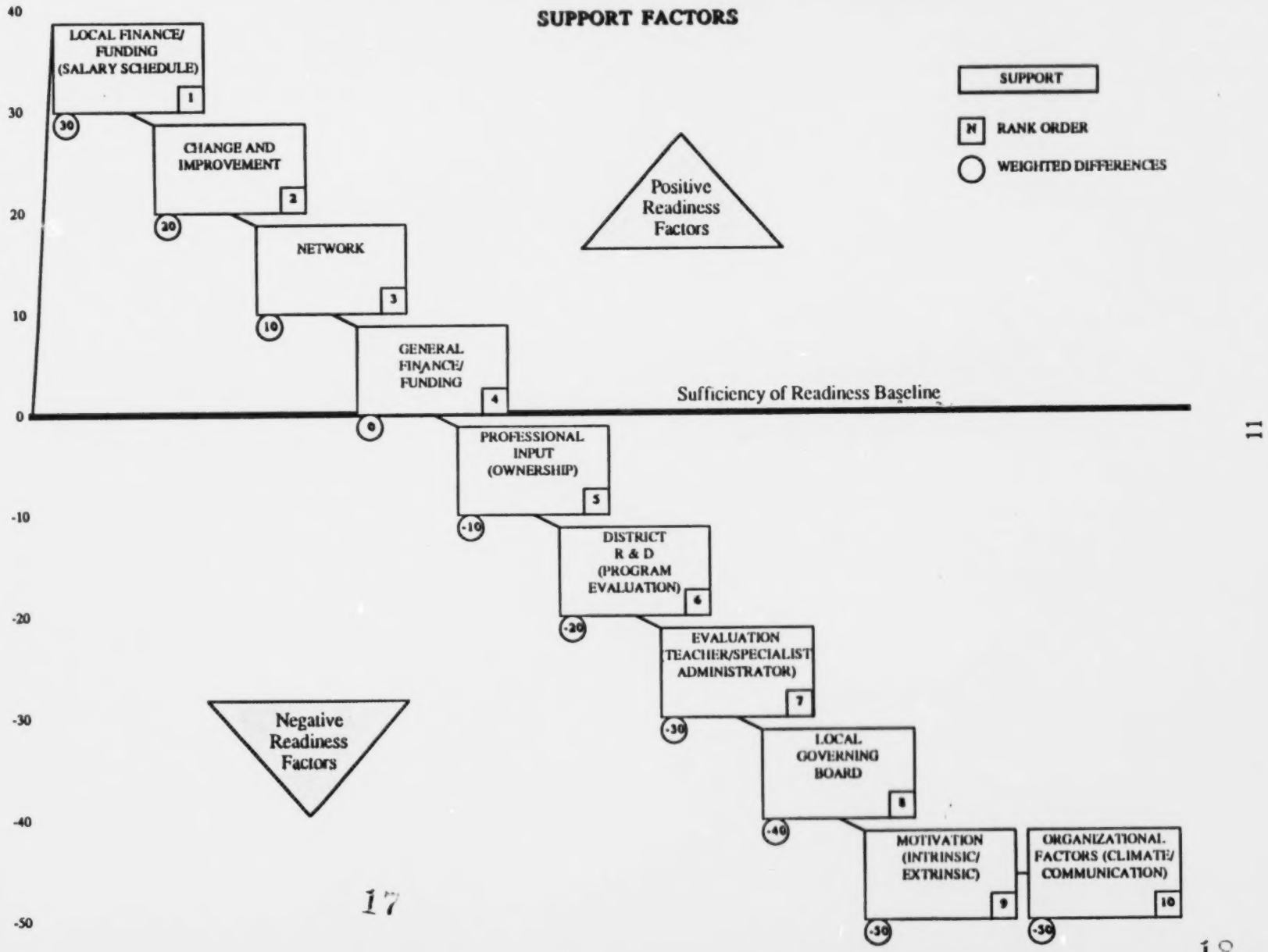


Figure 4

DISTRICT READINESS PROFILE OF STRENGTHS AND WEAKNESSES



Accountability serves two major purposes: ensuring goal-oriented activity for external funding agencies and dependable, timely self-monitoring within the system itself. (This dual function is akin to the external and internal reporting mandates of financial accounting systems. The former fulfills the stewardship function for government agencies, lenders and shareholders. The latter includes self-contained information and feedback loops to managers, administrators and subordinates.)

However, the important area of accountability, like other aspects of healthy system operations, is dependent to a large degree on *overall system readiness*. That is, a functional evaluation and reporting system cannot exist unless other components are prepared to support its creation.

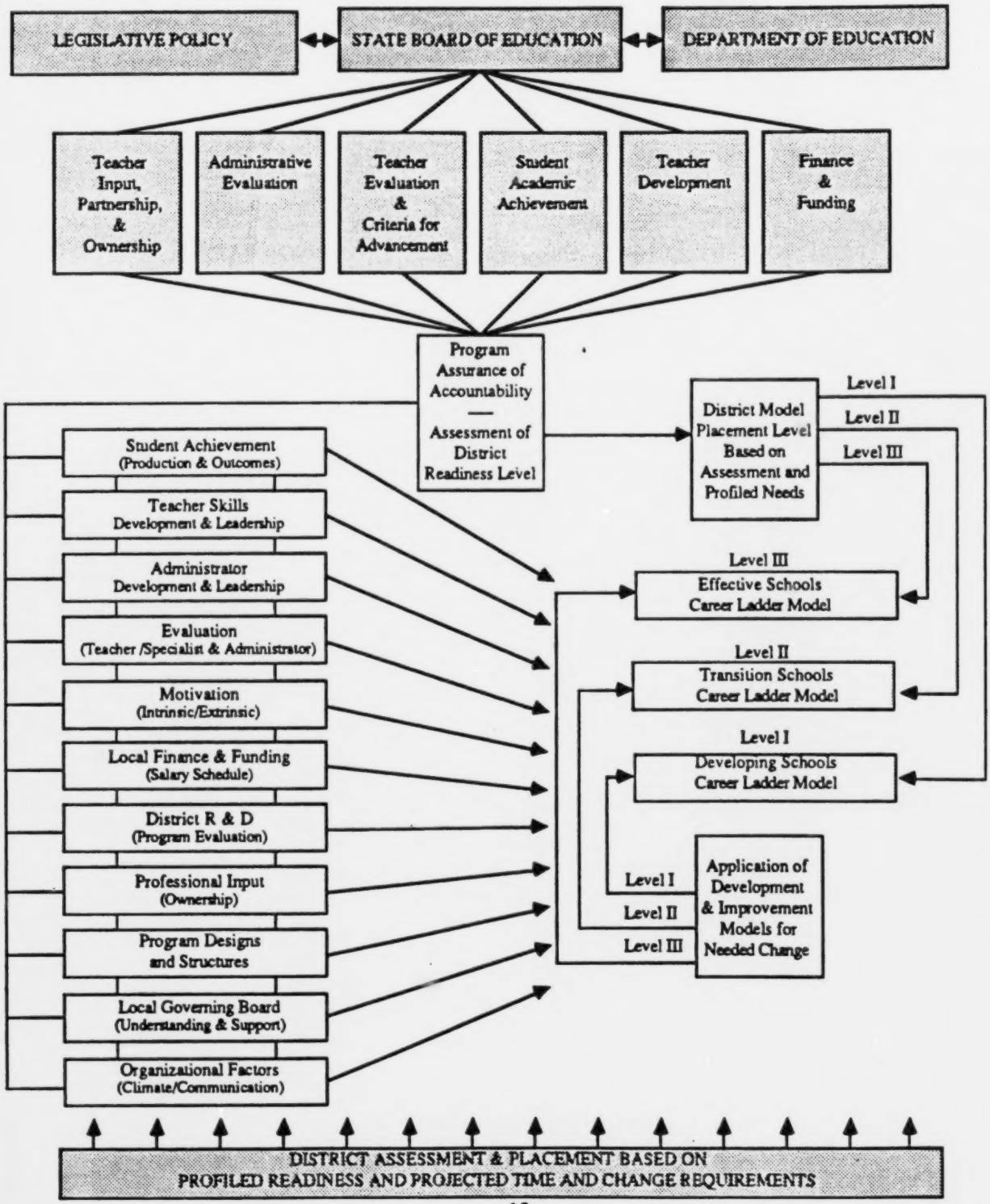
Accountability, in turn, affects assessment of overall system readiness to support change. The profiling procedure discussed in the immediately preceding section is a sophisticated mechanism for identifying those elements of an organizational system which are currently functioning at adequate levels to support integration of an external program such as Career Ladders, as well as those which are critically in need of remediation. Such a comprehensive self-assessment procedure depends on an accepted, reliable self-monitoring mechanism.

This key *interaction between readiness and accountability* is therefore at the heart of individual districts' efforts to meet the stated objectives of an external program successfully. Diversities in maintaining this balance account, in large measure, for corresponding variation in program success.

Figure 5, p. 13, depicts how this interaction may be combined with the profiling procedure in order to allow for multiple levels of districts' placement in the Career Ladder program. At the left-hand side of this model, one can see the same focus and support factors depicted in the readiness model of **Figure 2**, p. 7. The key factors which influence accountability are depicted in the upper portion of **Figure 5**, on the following page. In the uppermost boxes, the reader can see the external agencies (legislature, state board and department of education) to whom the aforementioned "stewardship" reporting responsibility is owed. The accountability function, in turn, is dependent upon the quality of system-specific evaluation procedures for its teachers and administrators. These should ideally be centered on the critical program goal of validly linking teacher performance to student achievement, in order to establish congruence of system activities with the overall objectives of the teacher incentive program. The ability of the district to develop such smoothly functioning evaluation systems depends upon such factors as teacher input and ownership, teacher development, and the present available level of finance and funding.

Figure 5

Assessment Model for Projected
District Readiness Levels


LEGISLATIVE POLICY
STATE BOARD OF EDUCATION
DEPARTMENT OF EDUCATION
Teacher Input, Partnership, & Ownership
Administrative Evaluation
Teacher Evaluation & Criteria for Advancement
Student Academic Achievement
Teacher Development
Finance & Funding
Program Assurance of Accountability — Assessment of District Readiness Level
District Model Placement Level Based on Assessment and Profiled Needs
Level I
Level II
Level III
Student Achievement (Production & Outcomes)
Teacher Skills Development & Leadership
Administrator Development & Leadership
Evaluation (Teacher /Specialist & Administrator)
Motivation (Intrinsic/Extrinsic)
Local Finance & Funding (Salary Schedule)
District R & D (Program Evaluation)
Professional Input (Ownership)
Program Designs and Structures
Local Governing Board (Understanding & Support)
Organizational Factors (Climate/Communication)
Level III
Effective Schools Career Ladder Model
Level II
Transition Schools Career Ladder Model
Level I
Developing Schools Career Ladder Model
Level I
Level II
Level III
Application of Development & Improvement Models for Needed Change
DISTRICT ASSESSMENT & PLACEMENT BASED ON
PROFILED READINESS AND PROJECTED TIME AND CHANGE REQUIREMENTS

These factors are all depicted in the second row of boxes associated with the "accountability" function in the upper portion of **Figure 5**, p. 13.

How can the existing diversities in district readiness and accountability be translated into maximally successful experiences with external change processes such as Career Ladders? The diagnostic information obtained from the profiling procedure can be used to place applicants into one of three alternative levels of program participation. This process is diagrammatically shown in the right-hand portion of **Figure 5**, on the previous page. These levels allow for the best possible match between present district capabilities and corresponding program responsibilities, thereby allowing the applicant to "experience immediate success" as well as the necessary time to correct existing insufficiencies and to be prepared to progress to the next level.

Each of these levels of program participation will be briefly discussed below. (The reader is referred to Summative Report IV, Pages 6 through 8, for additional detail.)

The Developing Schools Career Ladder Model (DSCLM), or Level I, is designed to promote essential district growth in a wide variety of job enlargement assignments. Up to 25% of teachers could be placed in Level I, and their assignments would include curriculum development, assessment of student learning and activities related to the unique social and demographic conditions faced by the district.

Upon successful attainment of these developmental objectives, the district could then apply for funding according to the Transitional Schools Career Ladder Model (TSCLM), or Level II. The developmental objectives of participants in the TSCLM would involve applying more technologically sophisticated procedures for accounting for student progress and linking it to teacher behaviors. Up to 50% of teachers could be recruited for program participation with Level I and II placement.

The third level of district participation is known as the Effective Schools Career Ladder Model, or ESCLM. This level is reserved for those systems whose interrelated elements have been profiled as functioning at maximally effective operational levels, including a comprehensive evaluation system which is capable of providing reliable, timely information as to accountability in meeting program goals.

This alternate-tier process of placement has been designed to enhance applicants' chances for success in meeting program objectives. In the first place, acceptance into the program is no longer "all-or-nothing." As a result, those districts with present deficiencies with respect to readiness and accountability can still qualify for participation if they show genuine promise for successful change. Thus they can experience some immediate successes with a set of objectives more carefully tailored to their current capabilities. These successes, in turn, provide the necessary intrinsic motivation to encourage system

improvement of areas of readiness and accountability, thereby strengthening the successful functioning of the overall organizational system, in addition to the more immediate goals of the external teacher-incentive program alone. As a consequence, the external change program is not only integrated more successfully; but it becomes a catalyst for needed improvements throughout the entire system itself.

Summative Matrix Comparison of Initial Legislative Mandates, Research Findings, and Related Policy Implications

The final portion of this document presents a side-by-side historical perspective on initial legislative regulations, along with directions for future program policy revision as suggested by summary research findings to date. This information is presented under headings which correspond to interrelated focus and support factors as depicted in the model in **Figure 2**, p. 7. Specifically, **Exhibit A**, p. 32-38, contain the sets of matrices which present this information for the focus and support factors, respectively. (Please note: in some cases, two or more components are combined, as they were jointly affected by legislation. An example of such overlap is in the two related areas of Student Achievement and Curriculum/Instruction/Measurement.)

This matrix presentation thereby enables the reader to identify readily "where we've been and where we seem to be going" relative to the Career Ladders pilot-test program in the state of Arizona. By presenting historical and recommended policy implications side by side, it is hoped that the reader can therefore gain a more "holistic" perspective about the main areas of program impact and accomplishment, as opposed to "getting lost" in the sometimes-overwhelming and excessive detail of individual data and research findings.

The next section contains qualitative, or "anecdotal," information from a number of participating districts about the specific effects of the Career Ladder Program on each of the focus and support factors identified in **Figure 2**, p. 7. These responses reflect their perceptions as to the actual impact of the pilot program on such important areas as student achievement, program designs and structures, and the skills development and leadership of teachers and administrators. These responses will be clustered into key themes under each focus and support factor subheading. In addition, illustrative quotes will be used throughout the discussion, in order to give the reader a flavor of the true effects of the program as actually experienced by these participants themselves.

Career Ladders Anecdotal Information

Introduction

A comprehensive evaluation of the Career Ladder program would be incomplete without giving participants a chance to "tell the story in their own words." Qualitative (open-ended) data typically contain rich, detailed descriptions of program impact and results. These data also frequently go off in novel, surprising areas which may have not occurred to the external researchers. As a result, careful analysis of such open-ended responses provides a more complete and valid picture of the program as it was actually experienced by the participants themselves.

These qualitative anecdotes were solicited from the members of the Career Ladder Pilot District Network (CLPDN) in September of 1989. Specifically, they were given a list of 24 focus and support factors and asked to write at least one positive comment concerning the effects of the Career Ladder program upon that area.

Responses were received from seven of the 14 districts belonging to the CLPDN. As expected, they contain a variety of viewpoints, as well as some particularly colorful quotations concerning the perceived impact of Career Ladders.

These main points are summarized in **Exhibit B** which appears on pages 39-46. They will also be briefly discussed under each focus and support factor subsection, directly below.

Student Achievement (Production and Outcomes)

In this area, the respondents pointed with pride to the percentage- and point-gains attained by their district's students on nationally normed tests such as the ITBS. They also indicated the hefty percentages of students and teachers meeting their targeted objectives for the school year. These results point to the beginnings of recognizing the need for *accountability*, as well as for *linking teacher performance with student achievement* in a valid and reliable manner. Obviously the existence of the CL program has spurred an awareness of the importance of a dependable ongoing evaluation system.

One district referred to the increased emphasis on providing its personnel with the proper procedures for pre-post testing and assessing the associated magnitude of gain scores. Another pointed out that the student achievement component now constituted 40% of the point value of teachers' required action plans.

In addition to improved documentation of gains in traditional areas, the CL program appears to have triggered a veritable "assessment versatility." One district noted, "Career Ladder has stimulated a move toward defining measurable outcomes in non-academic areas such as art, music and physical education."

Teachers and administrators also seemed more aware of the *broader scope* of the student-achievement assessment process. According to one district, " ... teachers are beginning to feel more comfortable dealing with outcomes as opposed to process."

The following quote perhaps best captures teachers' feelings of accomplishment and self-pride resulting from learning "the state-of-the-art" technology in accounting for student achievement, as but one tangible benefit of the CL program. " 'I have been teaching 8 years and know that I am teaching better as a result of the Career Ladder ... and if that doesn't improve my students' learning, I don't know what will ... ," is one teacher's explanation of student achievement gains," according to one district respondent.

Curriculum/Instruction/Student Achievement Measurement

Five of the seven respondents described the tangible benefits of ongoing curriculum alignment. One district reported a 90% alignment in the basic skill areas, with related improvements in teaching strategies, specific content and classroom materials such as textbooks. Another stated, "Not only have we begun to make great strides in aligning the curriculum with the state's essential skills and norm referenced testing, but we have begun to develop criteri[on] referenced testing that is more reliable and valid for measuring student achievement." As with the previous area, a third respondent pointed out an increase in quantifiable objectives which are specifically targeted at improved instructional practices.

Above all, there appeared to be a heightened awareness on the part of both teachers and administrators of the pivotal role played by a soundly developed curriculum. " ' I do believe that having the [CL] Plan in the district has made a difference in the overall quality of instruction ... All teachers are paying more attention to curriculum planning and lesson development in a systematic way, ... " is how one administrator stated this belief," was the written comment received from one respondent.

Teacher Skills (Development and Leadership)

Two general areas of satisfaction were evident in the responses to this topic. Career Ladders was perceived as fostering a greater number of high-quality formalized opportunities for ongoing improvement, such as inservice and peer coaching. The second frequently mentioned benefit of CL was a heightened sense of pride in one's image of *professionalism*, particularly with an increased number of genuine *teacher leaders*.

Not only are there increased growth programs; teachers themselves have realized corresponding opportunities to assume major leadership roles in these, and similar, activities. More and more inservice is now being conducted by a district's own staff.

This feeling of accomplishment which accompanies leadership has successfully been applied to other areas. Such shared responsibility for decision-making, according to one respondent, allow teachers " ... to gain a perspective and appreciation for the 'big picture.' " Another administrator observed that: " ... the CL promotes the sharing of leadership among administrators and teachers ... that's what research says ought to be happening in schools ... and in our district, it is."

This satisfaction with increased teacher-leadership has been matched by the intrinsically motivating sense of professionalism. One CL teacher commented, "I am proud to have participated [in the Plan] ... and feel more professional as a result." Another wrote, "The level of professionalism in the classroom has never been more refined."

Administrator Skills (Development and Leadership)

Respondents repeatedly referred to the improved leadership and enhanced skills which their administrators have acquired in evaluative activities generally, as a direct result of the CL program. Specifically, administrators have received ongoing inservice and other educational opportunities designed to enhance their abilities in teacher evaluation and student achievement gain-score assessment. One district has instituted continuing inservice for its administrators in these areas, with the targeted goal of attaining a 0.95 inter-rater reliability coefficient in teacher evaluation. Another provided a variety of staff-development-type educational opportunities for its principals, with such featured topics as the correlates of Effective Schools.

As with the preceding section, CL has engendered a greater amount of *shared decision-making* as a result of administrative awareness and support of the program. Such joint efforts at shared responsibility have, in turn, fostered an increasing sense of satisfaction, as well as camaraderie between superiors and their subordinates. One district refers to the joint CL program administration and the "non-adversarial model" of its associated "meet-and-confer process" for teachers and their principals. Another admitted that, "There has been a partnership developed that no one felt [was] possible in the past."

Along these lines, CL was credited with creating a bolstered awareness on the part of administrators of "what's going on in the classroom" on a day-to-day basis. One principal noted, "I feel that the best way to provide support for teachers is to see them in the classroom. I can be much more helpful as an instructional leader when I am more aware of the dynamics of the class."

Despite such increased opportunities for direct administrator involvement, some untapped areas still remain. One district observed that, while administrators' support for the CL program was admittedly high, they presently had little or no chance of getting

involved in the actual implementation of the program, as " ... our CL plan is teacher-run." Nonetheless, an increasing awareness of administrators' natural curiosity and sincere desire for greater hands-on involvement can serve as a catalyst for greater collaboration in decision-making -- with the clear potential for such eventual benefits to administrators as those described by other districts above.

Evaluation (Teacher and Administrator)

As in the preceding section, respondents focused on increased cooperation, consensus and shared responsibilities between teachers and administrators as beneficial "by-products" of the Career Ladder program. One commented: "There has been more cooperation between teachers and administrators on evaluation in the last five years than anyone would have thought possible." The increased reliance on peer evaluation in another participating district has resulted in " ... eliminating any conflict with the building principal's time and/or authority." A third respondent observed: "The evaluation instruments for Career Ladder teachers were mutually developed, with a majority of teacher input, by teachers and administrators utilizing a 'consensus' decision making process. There is [a] positive working relationship between teachers and administrators with regard to the evaluation process, as evidenced by no career ladder appeals of evaluation outcome[s] by teachers."

These increased collaborative efforts have also resulted in a heightened awareness on the part of principals of day-to-day classroom management activities. One secondary principal commented: "Through the combination of the CLAI review process and evaluations, I am exposed to a lot more of my teachers' work than in the past." This hands-on involvement of their supervisors, in turn, has certainly not gone unnoticed by the teachers themselves. One Career Ladder teacher noted: "I think my principal is more aware of the breadth and depth of my curriculum since spending more time in my room ... "

Other tangible benefits of the CL program consist of more objective and specific evaluation procedures, as well as increased provision for administrator training in the evaluation process. One district responded that: "Administrators have been trained more thoroughly in teacher evaluation and have the confidence of their staff when it comes to making summative judgments on teacher performance." Finally, another respondent noted that the CL program had spurred necessary revisions targeted at improvement in the district's existing evaluation process.

Motivation (Intrinsic/Extrinsic)

The Career Ladder program has clearly fostered a widespread sense of self-pride and self-esteem in its teacher-participants. Primary among these sources of *intrinsic* satisfaction is an increased perception of *professionalism.* As articulated by one respondent: "It's rewarding to be part of a plan in which teachers are definitely recognized for their efforts that go 'above and beyond' ... The Career Ladder system has helped me professionally and has made me value being treated as 'a professional.' " Another noted that "Teacher empowerment through increased role efficacy has resulted in increased positive attitudes."

Two districts pointed out the *interactive nature of extrinsic and intrinsic rewards* regarding this heightened sense of teacher professionalism. As explained by the first, "We will be rewarded (monetarily and otherwise) for being 'accountable.' I call this forced professionalism." The second stated that, "At the outset of the program, the primary motivation may have been monetary, but it became obvious that money would be a short term motivator. In the last three years the primary motivating force has been to become more professional as a teacher and to have more success with students."

In addition to the satisfactions derived from increased professionalism and accountability, several additional intrinsic motivators were mentioned by members of the CLPDN. These included increased opportunities for professional growth; a more precise goal orientation in one's activities; and the increased emphasis on student achievement itself.

With regard to *extrinsic* motivators, both the provision of monetary incentives and the increased opportunities for financial advancement were cited. One district also referred to the beneficial effects of paying CL teachers to attend workshops and other training sessions, pointing out that this compensation policy resulted in 422 out of 491 eligible teachers attending a recent mini-grant workshop series.

Local Finance and Funding (Salary Schedule)

A mixed bag of issues appeared under this particular heading. One which was singled out by two of the respondents was the *supplementary* nature of the local salary schedule. According to the first of these, "We use the Career Ladder funds to supplement the difference between where Career Ladder teachers would be on Framework and where they are on CL." The second noted, "The district has always supplemented state funding for our career ladder program and will continue to do so in the future. The salary schedule is based on performance in the classroom and other additional responsibilities are primarily paid for through addendums and are not part of the teachers' career ladders salaries."

Two other districts stressed the fact that the vast majority of the total allocated CL fund does, indeed, go directly to teacher salaries and benefits. A full 93%, in fact, is directly applied toward teacher compensation in one of these districts.

Another issue discussed in this section is the explicit endorsement of teachers of the performance-based nature of the local salary system. Another district pointed out that there had been beneficial effects on its teacher recruitment and retention as a direct result of its CL salary plan.

District Research and Development (Program Evaluation)

It is truly encouraging to note the rapid growth of local research efforts in response to the central issues touched upon in the Career Ladder program. Four of the seven respondents described studies which focused on student achievement and related outcomes. One administrator, for instance, recently completed a doctoral dissertation dealing with student achievement, teacher morale, and teacher turnover. Another district has created a comprehensive computerized data base which has been specially designed to generate an informational and diagnostic "student achievement profile."

In addition, districts have installed periodic research-based reporting mechanisms, similar to management information systems for chief executives in the private sector. One respondent described a series of advisory council sub-committees to perform in-depth evaluations of various aspects of the Career Ladder program. Another pointed out that district administrators were required to report research results periodically to the steering committee.

Another district has now instituted a practice of sending out periodic surveys to gauge "what's working." Finally, there was a greater interest in keeping up with other state and national research studies, not only to keep current but to apply the conclusions and implications to one's own program, in order to improve its functioning if possible.

Professional Input (Ownership)

Most respondents described the significant teacher and administrator representation on steering committees which had been enhanced in terms of their operational effectiveness. Two common themes emerged in their responses: the genuine feelings of *teacher ownership* of the program, and *related intrinsic satisfaction*. One district noted, "Because the steering committee is teacher-run, the career ladder teachers have developed, revised and taken responsibility for career ladder. This has produced a great deal of ownership." (underline in original text) The resultant feelings of self-satisfaction and accomplishment in having one's input taken seriously is well illustrated in the following

comment from one administrator: "Basically, I think the Career Ladder Committee has done a top-notch job of producing a plan we can be proud of and implementing it effectively."

Districts shared in detail the composition and tasks of career ladder steering committees. The *ongoing* nature of participant input was most evident from their written responses. Teachers and administrators had formalized means of *periodic, cyclical* program review, input and evaluative feedback. As one district put it: " ... an ongoing professional advisory committee ... [which is] made up of teachers and administrators ... meets no less than one time per month and any concerns relating to career ladder are discussed at these meetings. The district office also tries to meet with each individual staff [member] at each school at least twice a year to discuss the entire program." Some specific program areas which teachers and administrators have significantly influenced by their continual input include budget setting and revision, staff development activities, and design of the evaluation systems themselves.

One district effectively summed up its staff's enthusiasm about their perceived degree of professional input and how this change was attributable to the Career Ladder program. "We are using a feedback form to get specific personal data from teachers about how they have been impacted by CL programs -- responses are very enthusiastic. More people want an opportunity to become involved with the legislative process -- do whatever they can to keep the program."

Program Designs and Structures

Five of the seven respondents praised the clear focus on *instructional excellence* and *student achievement* which Career Ladders has brought to their educational systems. "Our career ladder program is designed around instruction and those factors that directly enhance students' success. Additional responsibilities relate directly to instruction," according to one district. A career ladder teacher in another district observed that, "It [the CL program] has made me a great deal more organized, do a better job of teaching skills sequentially, and has encouraged me to challenge my special education students with higher order thinking skills."

This emphasis on top-notch instructional processes has also fostered corresponding improvements in teacher cooperation. Another teacher noted, " ... We continue to share ideas, but now we also share approaches to the CLAI process or ideas about how to keep records or document our lesson plans." Thus the effects of sharper educational program focus have begun to be felt throughout the professional, interpersonal climate as well. Other tangible intrinsic benefits have included increased innovation and time expended on

improved instructional activities, particularly in those instances where related financial incentives are explicitly built into the district's plan.

Awareness of the need to construct a workable program plan has also extended into *responsible financial stewardship* on the part of participating districts. That is, they are properly concerned about attaining measurable benefits, in the form of improved instruction and related gains in student achievement, in return for program dollars invested. One respondent wrote, "We are looking closely at budget relative to program benefits and degree of involvement -- in order to use funds for the greatest value to the most teachers." Another observed that programs were now being explicitly designed with "teachers' needs in mind."

Local Governing Board (Understanding and Support)

A common theme of responses to this section was the tremendous *supportiveness* of their Board members for the Career Ladder program and its related educational objectives. One person wrote, "Our local governing board has, from the outset, supported the career ladder concept and has provided the necessary monetary support to supplement state funding. They have a very good understanding of the career ladder concept and specific meetings have been held to update them on the career ladder program." In the words of another district: " The ... board unanimously supports the District's career ladder program, as evidenced by its public action of approving the program with a five to zero vote of support."

The importance of educating Board members with regard to the goals and inner workings of the Career Ladder program has been recognized by the participant-districts. Two of them mentioned specific inservice provided to the school board on this topic. Increased awareness and support, in turn, have translated into overt financial backing of the program. (One exception of "lip service" was lamented by one respondent as follows: " [The] Board supports CL in theory, but has not committed themselves with matching funds or 'extra' monies.")

Perhaps one answer to this dilemma is an increased communication among teachers, administrators and school-board members with regard to the educational objectives of teacher-incentive programs such as Career Ladders. As one district pointed out, "Our Board is supportive of Career Ladders because our superintendent is so positive and involved in the Plan."

Organizational Factors (Climate and Communications)

Respondents eagerly pointed with pride to the satisfactions of *improved channels of communication* and *information access* which were attributed to the Career Ladder program. Specifically, there was a tremendous satisfaction with "being heard" by one's superiors, which in turn was effectively translated into more active involvement in program goals and activities on the part of teachers.

One district noted that, "There has never been more dialogue between administrators and teachers than we now have with the Career Ladder project. Overall, the climate in the district is very good because teachers know that they always have access to information and the administrative network."

These opportunities for upward and downward communication in the organizational hierarchy have increased in variety and scope since the inception of the the Career Ladders program in some districts. As one pointed out: "Teachers involved in the Career Ladder Plan generally report that having the Career Ladder Plan in the district is beneficial to students, teachers, and schools. Teachers have had many forums to express their opinions and feelings about the Career Ladder Plan: meetings, written surveys and narratives, interviews, verbal contact with representatives, and input into the Far West Laboratory report completed in June, 1989."

This realization of "finally having been heard," and the accompanying sense of professionalism, has inspired teacher-participants to translate their new-found satisfactions into increased involvement. "There is a very positive professional climate as well as effective communication in place between teachers, administrators and members of the Governing Board. This is primarily a result of having a standing career ladder committee on the program which is representative of teachers and one administrator." According to another respondent, "As a result of a CL newsletter, CL bulletin boards in every school, and the efforts of CL council representatives, teachers seem to be more informed about the plan, and consequently [they] respond more positively and participate to a much greater degree in the options."

A final tribute to the positive effects of the Career Ladder program upon organizational climate is, in effect, its "successful minimization of the negative." No innovation, however appealing and/or well-intentioned, is without its critics. However, one district pointed out that even potentially disruptive effects of this group are virtually nil when it comes to Career Ladders. " ... others (opponents) [are] just resigned to [the] fact that CL is here to stay." Such non-destructive tolerance may well serve as evidence of an organizational climate which is able to manage conflict and support a multitude of different points of view among its members.

Change and Improvement (Long-Range Plans)

A wide variety of observable benefits were cited by participant districts as being due to the positive influence of the Career Ladder program. Once again, the increased *long-term emphasis on linking teacher performance to improved student achievement* received multiple mentions. One district even singled out its efforts to *acquire and apply the latest "technology" in the assessment and measurement process*. "The district is continuing to strive to update information regarding reliable indicators, that measure teachers' success and our long-term goal is to continue to strive for reliability and validity in the area of teacher evaluation and student achievement." Another district mentioned that serious efforts were now being made with respect to long-range curriculum alignment.

Such *long-term strategic planning* relative to improved student achievement has been accomplished by pooling the talents of several levels of personnel in the organizational hierarchy. That is, the practice of shared decision-making once again came in for favorable mention. One respondent commented, "Teachers and administrators, from the Plan's conception, continue to have input to the committee to help refine and improve the Plan." As a result, participants have realized the long-run planning benefits of improved channels of communication and more timely, accurate information flow which have already been referred to in the section on organizational climate.

As in the private sector, operating conditions are seldom perfectly predictable. A *flexible approach to the strategic planning process* which includes alternative "contingency" subplans is actually the most realistic route to take. One respondent commended this equivalent approach in educational planning: "Our Career Ladder plan has proven to be adaptable to the needs of our teachers. This flexibility is a source of strength for our program."

Finally, participating districts are feeling sufficiently satisfied with their long-range planning successes to begin to consider innovative ways in which they can document and share these planning experiences with colleagues. One respondent described a video which his/her district is preparing and which will deal with its Career Ladder program experiences.

District Readiness Level (Assessment)

The responses to this section overwhelmingly confirmed the need for other essential organizational elements to be in place, and functioning satisfactorily, prior to initiation of an external change effort such as CL. That is, the focus and support model of readiness factors appears to hold true as reflected in participants' experiences.

District representatives spoke of the strong need for ongoing staff development programs, curriculum alignment, and active involvement of administrators in effecting positive change. One person wrote, "The district has been successful with the program because many elements such as leadership, communication, staff development, curriculum development, research development, etc., ... either were in place prior to our career ladder program or were developed shortly thereafter. Our organizational climate ... was an essential element for our success with the program." Another observed that: "The emphasis on student achievement, curriculum alignment and research all are critical to the District's eligibility for the 'Expert' level." A third respondent felt that: "Because administrative support is high and we have a staff development plan already well in place, [we] adapted easily to Career Ladder and [will] continue to experience success."

One can conclude from such comments that "the total system" critically needs to be in harmony for an outside teacher incentive program to have the greatest potential for achieving its goals. Ongoing monitoring of the individual elements of this system are warranted in light of maximizing their positive "meshing" with well-intentioned external programs, in order that *all* components continue to run smoothly.

Essential Elements for Educational Improvement and Success

Judging from their responses, participating districts have realized a noticeable increase in the quality of such factors as focus on student achievement and teacher accountability. Along these lines, they have noted a greater sharing and communication among teachers; more application of innovative teaching techniques; a greater variety of ongoing staff-development opportunities; and enhanced support from the top.

One respondent wrote, "Although the processes of planning, implementing and evaluating the areas of instruction, classroom management and counseling are imperative, the bottom line is student achievement. The combination of both process and product activities will result in the improvement of education and student success." Another expressed the opinion that, "Communication and leadership are the key elements for educational improvement. A willingness to trust one another and work together have made our career ladder successful."

State Finance and Funding

Comments for this factor centered around the critical need to supplement local funding with state support. In addition, two respondents praised the sufficiency of the funding provided by the state for their respective districts' local Career Ladder programs.

Two others believed that the funds which are provided are distributed in an equitable manner.

One individual felt that, "State funding for the career ladder program has certainly made the job of implementing the program much easier. The graduated increase of state funding over the life of the pilot program is a sound idea and should be incorporated into future plans for implementation."

Another indicated the pivotal role played by state-level financial support in the attempts to have program implementation reach its noteworthy goals. "Without state funding Career Ladder Plans would have been extremely difficult, if possible at all to formulate. The amount of money provided, has made it possible for teachers to realize a significant value placed upon the excellent teaching they do ... We're dependent on state funding to perpetuate the Career Ladder Plan in its present form, so that it can continue to benefit students, teachers and schools."

State Governing Board (Accountability/Implementation)

Several comments illustrated the increased level and quality of communications between state and local agencies in joining forces to attain the objectives of the Career Ladder program. In particular, the exemplary leadership of the State Superintendent was singled out for special praise.

As one district representative put it: "Although, the State Board of Education may not know all of the details about career ladder programs, the district has been fortunate that the State Superintendent, Diane Bishop, has been assigned as a legislative representative to oversee the District's career ladder program. Briefing sessions have been conducted with State Superintendent Bishop and representatives of the district's career ladder program. As a result, this relationship and ongoing line of communication is evident between the district's career ladder program and office of the State Superintendent for public instruction." According to another, "The state Governing Board's visit (with a legislative representative) each year has allowed us a chance to explain our plan and demonstrate its effectiveness district-wide."

Legislative Guidelines

Though it may seem paradoxical at first glance, the "rules and regulations" were applauded for both their specificity and their flexibility. That is, the participating districts valued the overall structure and detail evident in the initial legislation. However, they also appreciated the fact that there was sufficient "room" in the law for individual district diversity to be incorporated.

One person pointed out: "Legislative guidelines have been broad enough to let districts develop creative Career Ladder Plans that allows for the unique needs of individual districts. These guidelines give us latitude with funds which allow districts alternative compensation plans." According to another district representative, "The guidelines were feasible enough to allow for local initiative in designing and implementing [them]." A third noted: "Legislative guidelines currently in effect are sufficiently structured, so that individual districts can meet the needs of their staff." Finally, there was this statement: "The legislative guidelines for phase three school districts are very clear. It is without reservation that [our] career ladder program has been very effective and efficient as a result of the specific guidelines provided by the legislature."

Another district singled out the guidelines as having the 'proper focus' on student learning and teacher accountability, which have always been the overall intent of the Career Ladder incentive program. "Legislative guidelines have been reasonable for a pilot program and the emphasis on student achievement and teacher evaluation is right on target."

The last noteworthy point regarding legislative guidelines is their inherent "freedom of choice" with regard to Career Ladder participation. "The guideline that states voluntary participation by districts in the Career Ladder Plan is viewed by this Career Ladder Committee to be a valuable concept that should be protected."

Analysis of Research Variables, Program Evaluation and Improvement

Participating districts repeatedly cited the usefulness of the various research efforts in providing needed and practical information. Results of locally conducted studies have been helpful in assessing student achievement; predicting student learning for the long term; overall needs assessment; and improving CL program implementation.

In the words of one respondent, "[Our] School District continues to collect student data on both an aggregate and disaggregate basis. The District will continue to work towards improvement of the career ladder program evaluation. Specifically, [we are] utilizing longitudinal data on student achievement and determination of expected growth for all students assigned to career ladder teachers." Another observed, "The research that Northern Arizona University has done has been extremely helpful in evaluating the success of our career ladder program. This research also provides valuable information such as the readiness levels that can be helpful in the future implementation of career ladder programs." The most colorful way of conveying the practical application of research results is

illustrated in the following quote: "Now [there is] a mountain of data useful in diagnosing local needs."

The following comment perhaps best illustrates the clear value that districts perceive in continuing their "home-grown" research projects. "The analysis of career ladders has stated what we have seen -- students are benefitting, teachers are working and career ladders are successful in solid districts."

Arizona Legislature

The legislature was commended for the quality and frequency of its communication efforts with individual districts. This "hands-on" approach to monitoring the effects of the CL program was recognized and appreciated.

One district representative wrote, "The direct involvement by the Arizona Legislature in the career ladder program, we think, has been extremely helpful and enlightening. It has been exciting to have direct access to legislators and explain our positions relative to the pilot program." According to another, "[Our] School District maintains a communication network not only with the assigned legislators who oversee the District's career ladder program, but all legislators who are in the legislative district ... are kept informed. A major task for the school district will be to increase each legislator's knowledge to a higher level with regard to the District's CLP."

The strong leadership which the Arizona legislature has taken with regard to the goals of career ladders is clearly evident to the participating districts. One person noted, "The Arizona legislature is to be commended for taking leadership in passing the Arizona Career Ladder Pilot Program. Education is becoming more excellent in Arizona, for students, because of improved instruction developed through the Career Ladder Plan. It is also a strong factor in attracting and keeping excellent teachers in Arizona. This plan needs to be continued as standards in education continue to rise to the demands of the 1990's. A Career Ladder teacher states, ' ... Frankly, I would be devastated if a Plan that has proven so beneficial -- to me, to my students, to my school -- suddenly disappeared.' "

The legislature was also commended for the overall support which it has provided to participating districts. One individual pointed out that "[It] gave the [CL] project the staff support and technical support (NAU) required to succeed."

Career Ladder Pilot District Network (CLPDN)

Participating districts praised the network for serving as an effective ongoing mechanism for information dissemination, team approaches to problem solving, and high-quality communication. One person responded, "The Career Ladder Network has provided

an avenue for districts to communicate with each other and the Legislative Education Committee. Benefits derived from the Career Ladder Network are: increased understanding of the philosophy and goals of other districts with Career Ladder plans, and an opportunity to discuss problems and suggestions. The network meetings have also allowed districts to work together in compiling a report commenting on Career Ladder districts' attitudes on the future of Career Ladders in Arizona." Another felt that, "The Career Ladder Network Committee has been a very helpful resource in the implementation phase of career ladders. The sharing of ideas has made the implementation less stressful and, in my opinion, more productive." According to a third, "This is a sufficiently organized network that has been helpful in keeping the pilot districts 'in touch' and in keeping the legislature informed about Career Ladders." Finally, a fourth individual summed up the preceding comments quite well with: "Terrific sense of communication and sharing."

Department of Education (DOE)/State Board

Only one response was received to this section. The subject referenced his/her answer to "State Governing Board (Accountability)," in which the state board was commended for improving the overall level of communication, as well as the commitment to quality of the current State Superintendent of Education.

Summary Comments

It seems clear from the preceding responses that participating districts have had very positive experiences with the Career Ladder Program. They have applauded its goals of greater teacher effectiveness and accountability for increased student achievement. In addition, they have recognized the effects of Career Ladders upon the individual organizational focus and support factors (illustrated in **Figure 2** on p. 7). Implementation of this program has greatly enhanced teacher professionalism, overall communications, and involvement of administrators in attaining the laudable goals of this program. In addition, there has been greater cooperation between participating districts and external agencies such as the legislature and the department of education. Pilot districts are reaching out to one another to share ideas, troubleshoot as a team, and generally promote the key goals of the program. They are eagerly initiating their own research efforts, as well as learning from studies conducted by others. Systems have been strengthened, both from within and without, by the focused efforts of Career Ladders to attain greater student learning. It is encouraging to note these positive responses to an external change program, and therefore

to realize that educational professionals will apply themselves to change efforts with such zeal and enthusiasm.

Conclusion

Many valuable lessons have been learned from the five-year pilot-test of the Arizona Career Ladder teacher incentive and development program. The evaluation process has revealed some startling discrepancies between the initial legislative mandates and the reality of districts' attempts to comply. Foremost among these was an extreme diversity with respect to individual districts' readiness to conform to uniform legislated regulations and time-lines. Therefore, the well-intended "fairness" and "simplicity" of a single set of guidelines resulted instead in some accidental inequities for those districts struggling to comply with requirements beyond their present readiness capabilities.

In their attempts to understand this discrepancy between intent and reality, the evaluators developed a comprehensive theoretical model of focus and support factors which must be functioning adequately prior to successful initiation of change efforts. This proposed theoretical model has since been repeatedly shown to be a valid and accurate depiction of actual organizational processes for participating districts. Therefore, it has been adopted as part of a unique *profiling* procedure, whereby each individual district (both as an applicant and as an accepted program participant) can be objectively assessed with respect to the current "level of operational health" of each focus and support factor. As a result, both program decision-makers and district administrators obtain valuable feedback as to possible necessary overall remediation for any of their system elements. Furthermore, future legislation concerning continuations and/or extensions of Career Ladders can be revised to correspond more closely to the reality of program implementation.

In coming "full circle" from monitoring of present legislation to making policy recommendations based on systematic observation of program participants, the evaluation process has contributed a significant explanatory model of organizational factors affecting system readiness for change. The benefits realized from applying this model have clearly extended *beyond* the pilot-test of the Career Ladder program itself. Administrators, researchers and legislators have gained a more thorough and accurate understanding of the essential system-specific factors which can determine the ultimate success or failure of any externally developed reform movement, however well-intentioned. This allows for a realization of greater cost efficiencies and corresponding returns on investment of scarce public funding of such projects. In addition, the diagnostic information provided by the profiling process serves as a useful *overall evaluative model* for district decision-makers.

EXHIBIT A

—

THE ARIZONA CAREER LADDER RESEARCH & EVALUATION PROJECT

Matrices of Legislative Mandates, Research Findings and Policy

Recommendations Related to Essential Organizational

Focus and Support Factors

Table 1 A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Focus Factors

Student Achievement & Curriculum/Instruction/Measurement		
Legislative Mandates	Research Findings	Policy Implications & Recommendations
Document how the participating CL district's plan is designed to improve student achievement.	1) Teachers have realized significant gains with respect to their professional skills development & their impact on improved student achievement. Futhermore, three studies have statistically demonstrated this link between levels of teacher performance & student gain scores on a comprehensive standardized achievement test. (See Exhibit B, p. 48) 2) Most districts cannot tangibly demonstrate progam's effects on student achievement at the present time. Deficiencies exist with respect to: a) Establishing a valid curriculum; b) Relating process evaluation to product evlauation; c) Developing teacher competencies to pre- & post- test; d) Reliably linking teacher performance to student achievement, via correctly normed local, state & national tests.	a) Recognize diversity in readiness to demonstrate accountability for student learning by assessing & placing individual districts on one of three alternative models of program participation: Districts would progress from developing schools to transitional schools to effective schools, by developing the four capabilities listed under point 2 (Research Findings), thereby reliably linking teacher performance to student achievement; b) Explicitly include "educational specialists" (e.g. school psychologists, counselors, & librarians) within the staff definition of professionals who significantly impact student achievement; c) Encourage periodic review & revision of curricula by local universities; d) Encourage partnerships with private sector (business & industry) to work on educational systems, structures & basic procedures of operation.

Table 1 A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Focus Factors

Administrator Skills Development & Leadership		
Legislative Mandates	Research Findings	Policy Implications & Recommendations
Explicit provision was made for administrative involvement with respect to two key areas: a) Majority support of administrative, as well as teacher, personnel by confidential ballot is required prior to program adoption; and b) Documentation of procedures for support of faculty development & evaluation of principals is also required.	Administrative personnel have consistently expressed a desire to be more actively involved with planning & implementation of the Career Ladder program. At the same time, however, they feel that they have not been given adequate inservice & necessary background information on the Career Ladder program. Furthermore, they have expressed a pervasive feeling of being "left out" of significant Career Ladder decision-making activities, such as strategic program planning, implementation & evaluation.	Increased communication & shared decision-making responsibilities among administrators, Career Ladder program directors & participating teachers, including: a) Mandated inservice & other educational opportunities for administrators in Career Ladder applicant districts, as to specifics on program intent & purpose; b) Clearly delineated, ongoing opportunities for district administrators to become more actively involved in such pivotal Career Ladder related decision activities as evaluation of Career Ladder teachers.

Table 1. A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Focus Factors

Teacher Skills Development & Leadership

Legislative Mandates	Research Findings	Policy Implications & Recommendations
Job enlargement via additional skills & responsibilities is required.	Delegation of a wider variety & scope of duties to teachers would alleviate pressures on administrators. Teachers can also provide valuable input relative to such tasks as curriculum development, mentoring, peer coaching & clinical supervision.	a) Continue "additional responsibilities" legislative requirement along with explicit recognition of the extended time required for such duties (e.g., contract extensions for top-level teachers akin to those in the private sector); b) Incorporate increasing variety & scope of such activities as part of districts' progressions through the three alternative models of CL participation (e.g., curriculum development assignments at developing school levels, vs. mentoring duties at effective school levels); c) Offer "educational specialists" the same opportunities for job enlargement as those awarded to other teachers; d) Review present teacher-certification requirements to determine the adequacy for licensure of high-quality instructional personnel.

Table 2 A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Support Factors

Professional Input and Ownership & Organizational Climate		
Legislative Mandates	Research Findings	Policy Implications & Recommendations
Evidence of teacher consensus with respect to program approval & development of plan is required.	Those programs which have been implemented in cooperative environments with well-functioning channels of communication have also been the most successful. Corroboration of organizational psychology finding from the private sector: "People will support that which they help create" (e.g., teacher representation on steering committees which have been successfully integrated with the balance of the district's administrative decision-making structure).	a) Majority approval by confidential ballot should continue to be a prerequisite for program implementation & continuation; b) Expand legislated teacher role beyond merely that of "consultant" to meaningful & periodic input into all aspects of program implementation & refinement and; c) Work for improvements of dysfunctional aspects of existing organizational climate (e.g., excessive competitiveness & withholding of information) prior to implementation of external programs such as Career Ladders.

Table 2 A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Support Factors

Program Designs and Structures

Legislative Mandates	Research Findings	Policy Implications & Recommendations
Requirement for individual district plans to contain specifics with regard to: a) Professional advancement; b) Education as a requirement; c) Teacher improvement; d) Plans for program implementation; e) Procedures for periodic teacher evaluation; and f) Procedures for periodic administrator evaluation.	a) Most districts have well developed program designs & structures. However, extreme diversities exist with respect to readiness for implementation of these plans. Such differences in readiness have led to difficulties in compliance with legislated uniform time lines for change; b) Increased focus on improvement of teacher performance has led participants to avail themselves of inservice opportunities. However, others have not moved beyond randomly accumulating college credits & similar activities. c) Local efforts at periodic program evaluation have increased; d) Those districts which have made efforts at increasing direct administrative involvement in the program design & implementation process have also experienced the most success with their Career Ladder programs.	a) Continue requiring applicant districts to submit well-documented program designs & structures; b) Build in graduated & flexible time lines, to correspond to individual differences with respect to current readiness for implementation; c) Continue to require provision of opportunities for improvement of performance; d) Require evaluation & review by internally developed integrative research & development component; e) Continue administrator evaluation concerning their knowledge & extent of Career Ladder support; and f) Develop evaluation systems for "educational specialists" similar to those for other teachers.

Table 2 A Matrix of Legislative Mandates, Research Findings and Policy Recommendations Related to Essential Organizational Support Factors

Local Governing Board

Legislative Mandate	Research Findings	Policy Implications & Recommendations
Provision for governing board to apply for Career Ladder program participation has been made.	Local governing board has consistently been shown to be a critical component in determining ultimate success or failure of Career Ladder program implementation. In particular, potential for success has been considerably enhanced in those districts with boards who are informed of Career Ladder program intent & who do not use it as a vehicle to further their own separate political agendas.	a) Mandate assessment of governing board by third-party evaluation, with respect to its level of understanding & support of Career Ladder agency concepts; b) If necessary, provide in-service to increase such understanding & support to acceptable levels.

Professional Networks

Legislative Mandate	Research Findings	Policy Implications & Recommendations
No explicit legislative requirements exist at present.	Network has served as a valuable liaison between districts & policy-making bodies (e.g., by generating recommendations for legislative program revision).	Require all funded Career Ladder districts to join and participate in a network which functions independently of formal governing boards.

State Governing Board (ADE)

Legislative Mandate	Research Findings	Policy Implications & Recommendations
None exist at present.	Ongoing research studies & continued interest in teacher incentive plans by ADE have been documented. In particular, continue research on linking teacher performance to student achievement reliably & devising comprehensive & valid curricula. Implementation & validation of Arizona Student Assessment Plan should remain a top priority.	Formulate policy guidelines to encourage Career Ladder districts to adopt the comprehensive ADE curriculum. Also, encourage individual districts to assist ADE in ongoing validation of the assessment plan.

EXHIBIT B

—

THE ARIZONA CAREER LADDER RESEARCH & EVALUATION PROJECT

SUMMARY OF POSITIVE ORGANIZATIONAL COMPONENTS:

Summated Matrices Depicting Positive Anecdotes Related to

Interrelated Organizational Focus & Support Factors

In Successful Career Ladder Pilot-Test

School Districts

Table 3

Summary of Key Points: Career Ladder Anecdotes

Student Achievement Production & Outcomes	Curriculum/Instruction/ Student Achievement Measurement	Teacher Skills Development & Leadership
* Increased ability to document pre- and post- tests, and to assess associated gain scores. * Increased ability to define measurable outcomes in traditionally "hard-to-quantify" areas (e.g. art, music, phys/ed). * Greater emphasis on student achievement documentation in teacher's action plans. * Increased documentation of standardized test results. * Greater teacher satisfaction, self-pride, and sense of accomplishment relative to student achievement gain-score assessment.	* Tangible, ongoing curriculum alignment with district objectives (5). * Creation of locally developed assessment tools. * Increased focus on higher quality content, skills,classroom materials and instructional strategies. * Heightened teacher and administrator awareness of overall importance of sound curriculum development.	* Emergence of "teacher leaders" (4) * Increased professionalism (2). * Improved peer coaching (2). * Year-round inservice opportunities (2). * Teacher skills development with respect to: a) planning b) instruction c) interpersonal skills d) human growth & development.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

Administrator Skills Development & Leadership	Evaluation (Teachers & Administrators)	Motivation (Intrinsic & Extrinsic)
* Improved leadership skills in: a) teacher evaluation (3) b) student achievement assessment (3) c) instructional skills * Ongoing inservice opportunities for administrators. * Shared decision-making (teachers & administrators) * Heightened administrator awareness of day-to-day classroom activities.	* Greater sense of cooperation (3) * Better evaluation training for administrators (2). * Teacher input into evaluation process (2). * More objective & specific evaluation procedures. * Heightened administrator awareness of day-to-day classroom activities. * Initiation of necessary revisions in local evaluation system in process.	<u>Intrinsic:</u> * Perception of greater professionalism (3). * Increased opportunities for professional growth (2). * Increased sense of accountability (2) * Improved goal orientation. * Increased emphasis on student achievement. <u>Extrinsic:</u> * Existence of greater financial incentives (2). * Rapid monetary increases possible. * Compensation for attendance at workshops and other teacher-improvement activities.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

Local Finance & Funding (Salary Schedule)	District Research & Development (Program Evaluation)	Professional Input (Ownership)	Program Designs & Structures
* Majority of funds going for teacher compensation (2). * Separateness of Career Ladders compensation funding from standard salary schedule (2). * Movement toward parity (more competitive). * Equitable funding distribution. * Effectiveness of local salary schedule in teacher recruitment & retention. * Teachers have endorsed a performance-based approach to salaries.	*Comprehensive internal research & evaluation in: a) student achievement (4) b) staff development (2) c) instructional practices d) teacher morale & turnover. *Development of computerized personnel & student data bases. *Establishment of advisory council sub-committees. * Conducting own local experimental studies. *Reporting of research results to steering committee. *Ongoing review of other related state & national studies.	* Ongoing mechanisms for continual teacher & administrator input (4). * Feelings of genuine ownership (2). * Tangible effects realized with respect to: a) budget b) staff c) development d) design, review, & revisions of evaluation system itself.	*Focus on excellence in instruction & student achievement (4). *Innovation is encouraged. *Monetary rewards for expenditure of teacher time & effects. *Financial "stewardship" (concern for realizing maximal benefits from program funds spent). * Designed "with teachers' needs in mind." * Commitment to professionalism. * Improved effectiveness in: a) planning b) implementing c) classroom management skills d) counseling skills.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

Local Governing Board (Understanding & Support)	Organizational Factors Climate & Communications	Change & Improvements (Long-Range Plan)
* Supportive attitude of Board towards Career Ladder Objectives (3). * Active desire to learn more about Career Ladders (2) * Importance of provision of financial support by Board (2). * Enhanced interpersonal relationships & communication between Board members & administrators.	* Improved top-down & bottom-up channels of communication (4). * Sense of "being listened to". (3) * Provision of timely, relevant, dependable information (2). * Satisfaction with shared decision making (2). * Pride in one's professional image. * Better management of conflict.	* Greater emphasis on student achievement (2). * Shared decision-making responsibilities (2). * Concern for teacher skills, improvement & evaluations (2). * Improved overall organizational structure. * Support from administrators. * Support from school board. * Focus on curricular alignment. * Initiation of locally planned & developed research activities. * Greater flexibility in district planning process. * Improved validity & reliability of measurement & assessment process. * Provision of timely, relevant, & dependable information. * Wider dissemination of local Career Ladders program experiences.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

District Readiness Level (Assessment)	Essential Elements for Educational Improvement & Success	Professional Networks	State Finance & Funding
* Other organizational factors working in harmony: a) staff development (2) b) well-aligned curriculum (2) c) support from administrators d) well-developed training procedures e) well-developed evaluation system	* Greater accountability. * Focus on student achievement. * Improved teaching skills. * Increased sharing of ideas among teachers. * Better overall communication. * Better leadership. * Increased opportunities for staff development & training.	* Cooperation vs. competition. * More sharing. * Administrator involvement. * Wider networking (with other existing organizations).	* Critical need for state-level funding (2). * Adequacy of amount of state-level funding (2). * Equity in disbursement of funds (2). * Approval of built-in graduated increases.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

State Governing Board (Accountability & Implementation)	Legislative Guidelines	Analysis of Research Variables, Program Evaluation & Improvement	Arizona Legislature
* Improved communications (2). * Quality State Superintendent.	* Sufficient structure & detail (2). * Flexibility with regard to local diversity (2). * Proper emphasis on student achievement. * Allowance for voluntary participation.	* Generation of useful information for: a) assessing current student achievement; b) forecasting future learning gains; c) needs assessment; d) program implementation.	* Ongoing communication with districts (3). * Quality leadership. * Provision of adequate support services.

Table 3 Continued

Summary of Key Points: Career Ladder Anecdotes

Career Ladder Pilot District Network (CLPDN)	Department of Education & State Board
* Sharing ideas (3). * Better communication (3). * Better information dissemination (2).	* Improved communications. * Quality State Superintendent.

EXHIBIT C

—

SUMMATIVE REPORT IX

EXECUTIVE SUMMARY:

Recommendations to the JLCCL for Pre-Legislative

Phase of the Arizona Career Ladder Program.

NORTHERN ARIZONA UNIVERSITY

CENTER FOR EXCELLENCE IN EDUCATION

EXECUTIVE SUMMARY: RECOMMENDATIONS TO THE JLCCL FOR PRE-LEGISLATIVE PHASE OF THE ARIZONA CAREER LADDER PROGRAM

THURSDAY, NOVEMBER 30, 1989

Introduction

Northern Arizona University, in cooperation with Arizona State University and the University of Arizona, has been researching the Career Ladder concept for the past five years. Our major conclusion is that *such a program does positively impact student achievement by its effects on motivation & retention of high-quality teachers.* Other key findings appear below.

Summary Findings

1. The researchers have pinpointed "what works & what doesn't" for program success. That is, we've learned how school organizations function, as well as which elements of these organizations directly affect school reform. In short: *we know the essential elements of success*, not just in terms of organizations, but all the way from legislative structures through policy formulation. We have developed a model which shows all of these factors & how they affect reform movements.

2. The researchers need to keep studying those ingredients of schools & districts which can "make or break" well-intentioned reform movements. How are they operating in Career Ladder districts & how do they affect program success or failure?

3. The researchers also can use what we know about "success elements" to help the "have-not" districts improve & restructure, so that they can participate in this reform program and experience supportive change. In this way, *all districts in the state can be helped to ensure accountability for student progress*.

4. Programs such as Career Ladders require *sufficient funding* to ensure their successful integration into districts.

5. Two *critical lessons* have been learned from observing CL program operation in Arizona & other states:

   a) Such programs have tended to revert to *solidified bureaucracies* which stifle the dynamics & creativity upon which reform movements have been built;

   b) where special-interest & outside political interference has taken over, program results have been sabotaged. Specifically, there has been information filtering & distortion of evaluation results.

PO Box 5774 Flagstaff, AZ 86011-5774 (602) 523-2611

6. *An objective, outside "3rd-party evaluator" would help prevent such negative results.* This external assessment element should be written into legislative policy & should also continue to be completely free of special-interest interference. If this "3rd-party evaluator" has an opportunity to look at the total structure of participating districts, & can freely make objective recommendations for any needed adjustments in the system, these reform programs *can, & will*, achieve the positive results on teachers & students which the legislation intended.

Concluding Comments

Northern Arizona University has had a solid commitment to evaluating program results for the entire five years of the CL pilot-test program. We are now carefully studying the impact of the political & special-interest influence upon the carefully designed goals of such reform movements. Currently the research is focusing on the part of the model which relates to the legislative process phase of political policy. In addition, we are continuing to study the "success" & "failure" ingredients of school organizations & how they influence the program.

Within the next few weeks, we will have available a highly readable report of summary conclusions, recommendations, and a report of "positive anecdotes," or successful experiences with the CL program as reported to us by the participating districts.

Our complete results are *always* available to any & all interested parties. Please feel free to contact Dr. Richard D. Packard, Manager of the Arizona Career Ladder Research & Evaluation Project, with any questions or concerns at (602) 523-5852, or at the address shown on page 46.

EXHIBIT D

—

SUMMATIVE REPORT X

THE ARIZONA CAREER LADDER RESEARCH & EVALUATION PROJECT

FINDINGS RELATED TO STUDENT ACHIEVEMENT:

Qualitative & Quantitative Evidence Relative to the Positive Impact

of the Career Ladders Teacher Incentive Program on

Student Achievement in Arizona

Pilot-Test School Districts

Impact of Career Ladders on Student Achievement In Arizona Pilot-Test Districts

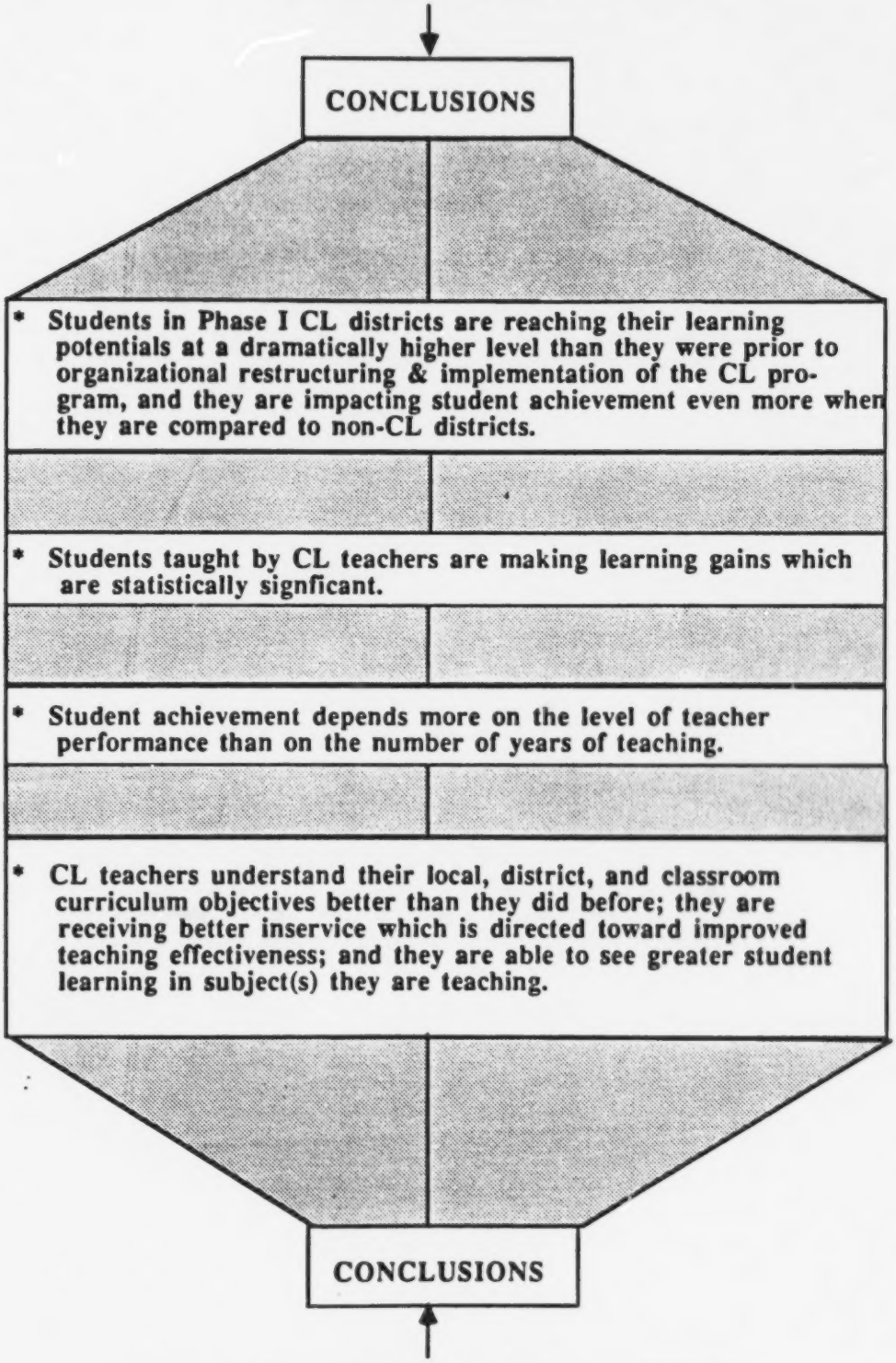
Sources/Authors	Key Findings	Conclusions
Helmstadter/Walton-Braver (ASU)	After implementation of the Career Ladder Teacher Incentive Program, there was a **150% increase in Phase I school districts' impact on student achievement** (over non-CL districts in the state) on a nationally normed standardized basic skills test of reading, language & math ability.	
Fimbres, Sunnyside (U of A)	1. Student performance on a nationally normed test of reading, language, & math skills was higher in classes taught by CL teachers. 2. Number of years of teacher experience by itself is not related to student achievement.	
Nine, Apache Junction (NAU)	Students taught by CL teachers who are placed higher on the ladder achieve at a higher level on nationally normed tests of reading, language, & math skills than do those placed lower on the ladder.	
Dickson/DeGracie/Guy (Mesa)	1. After just one year of the CL program, class averages in reading, math, & language on a nationally normed test: a) were higher for CL teachers than for non-CL teachers; b) were higher for CL teachers placed higher on the ladder. 2. Number of years of teacher experience by itself is not related to student achievement.	
The Network Amphitheater, Apache Junction, Catalina Foothills, Cave Creek, Creighton, Dysart, Flowing Wells, Ganado, Kyrene, Litchfield, Mesa, Peoria, Sunnyside, Window Rock	Some factors reported by districts which are positively related to student achievement, and which are due directly to their participation in the CL program, are: 1. Better curriculum alignment; 2. Higher-level learning objectives being set by teachers; 3. Increased "hands-on" involvement of their administrators in day-to-day classroom teaching activities; 4. More locally developed learning methods & materials; and 5. More communication & sharing among teachers.	
Packard/Dereshiwsky (NAU)	1. CL teachers are learning to calculate their own gain scores on a variety of national & locally developed tests which directly show their accountability for student achievement. 2. In addition, districts are learning how to show their actual impact on student achievement statistically, using scores from national, state & local tests. 3. CL teachers are documenting student learning which is happening in their classrooms, as well as their own accountability for student achievement, in their portfolios. 4. The expected future student achievement can be predicted for any type of subject taught & any type of test. 5. Case studies & other qualitative research has validated the need for restructuring of certain parts of the organization so that they are better focused on the major goals of teacher development & student achievement; i.e., teacher evaluation & development procedures which are more directly tied to those activities which actually affect student learning.	

CONCLUSIONS

Dr. Richard D. Packard, Manager, The Arizona Career Ladder Research & Evaluation Project,
Center for Excellence in Education, P.O. Box 5774, NAU, Flagstaff, AZ 86011, Ph: (602) 523-5852

BEST COPY AVAILABLE

Impact of Career Ladders on Student Achievement
In Arizona Pilot-Test Districts


CONCLUSIONS
* Students in Phase I CL districts are reaching their learning potentials at a dramatically higher level than they were prior to organizational restructuring & implementation of the CL program, and they are impacting student achievement even more when they are compared to non-CL districts.
* Students taught by CL teachers are making learning gains which are statistically signficant.
* Student achievement depends more on the level of teacher performance than on the number of years of teaching.
* CL teachers understand their local, district, and classroom curriculum objectives better than they did before; they are receiving better inservice which is directed toward improved teaching effectiveness; and they are able to see greater student learning in subject(s) they are teaching.
CONCLUSIONS

Impact of Career Ladders on Student Achievement
In Arizona Pilot-Test Districts